

**CMPT 352 Midterm 2006 Exam**

80 Mins CLOSED BOOK

Do all 9 questions for 62 marks.

NAME: \_\_\_\_\_

Student#: \_\_\_\_\_

Use POINT FORM wherever possible. Use this paper (there is lots of room on the back). Please ask for an exam booklet if you need one. Budget your time as you could easily spend too long on a short question! If you are not sure what is meant by a question, or you spot a problem in the exam, write me a note about it and then make an assumption, and answer the question based on the assumption you have made (and stated). Closed Book - no books, notes or electronic devices allowed.

1. (3 marks) When a workstation connected to a LAN reads all frames or packets going past it even though they are not addressed to it, the workstation is in

Promiscuous mode.

2. (3 marks) True or False: "Having a low-profile, little-known Web site makes it far less likely that your Web site will be attacked by hackers." Briefly indicate the reason you chose your answer:

false, as security is important to all  
organizations. The site may be a favored target  
for amateur hackers if it's thought to have  
low security.

3. (3 marks) True or False: "nMap can usually tell what version of Windows is being ran on a targeted host." Briefly indicate the reason you chose your answer:

True. Although it can give a vague answer  
with an -sT scan, an -sV scan will give  
service versions, and that would help deduce  
the exact OS.

4. (3 marks) True or False: "Determining the current operating system, web-server version, and the update history of a web site, while valuable to an attacker, is usually difficult to do." Briefly indicate the reason you chose your answer:

false. This can be done by routine scans using  
Nmap, or a website such as Netcraft.

5. (3 marks) True or False: "Many of the same legal issues arise when monitoring employee activity on a Web site and monitoring customer or visitor activity on the same Web site." Briefly indicate the reason you chose your answer:

False, Although Privacy issues are called  
in to question in both cases, an  
employee is often using work property  
and how that property is used is the right of  
the employer to know, whereas a customer  
may be at home, and their info is generally

6. (5 marks) What is "network sniffing"? Name three (3) typical counter measures to limit the danger or to discover the presence of an unauthorized sniffer?

Definition: Studying all packets on a network  
despite not being addressed to the computer. *use for denegates.*

Counter measures: Avoid Wireless Networks  
Do physical monitoring of network jacks.  
Encrypt packets before transmission.

7. (30 Marks – 3 marks each) Briefly define the following terms we have discussed in the field of infoSec (an example may help but is not required) AND explain the importance or use in information technology security:

a. The wild list:

Definition: A list of "wild" viruses

Importance/Use: This website will keep an  
account of when a particular  
virus is found on a participating system  
so InfoSec personell can be kept up to date

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b. Scan:

Definition: Trying to get information from multiple targets. may be multiple probes.

Importance/Use: To find out information of a system. This may be done during an audit to see if any confidential info may be revealed.

c. War driving:

Definition: Driving around trying to detect a wireless network.

Importance/Use: In the most harmless case, it could be used by someone checking their email, in a more malicious case it could be used to initiate a DDoS attack to prevent an attacker from

d. Polymorphic virus:

Definition: A virus that has multiple forms, being traced to their home.

Importance/Use: This can be used to make a more serious attack on unsuspecting systems.

e. Dumpster diving:

Definition: Looking through garbage to locate confidential information, like Names or Passwords.

Importance/Use: If a person located a list of passwords, it could ease the hacking process. If a list of employees was found, it could be used in conjunction with Social Engineering.

f. Convergence:

Definition: \_\_\_\_\_

Importance/Use: \_\_\_\_\_

g. Evil Twin attack on a wireless network

Definition: Using another router with stronger signal to get other computers to connect to it.

Importance/Use: If a computer connected to it, instead of the correct router, it could give away about how to authenticate to the correct Network.

h. Risk Management

Definition: to identify and protect against risks.

Importance/Use: This is done to find threats, the likelihood of threats and compare the cost of protection and the cost of recovering from a threat.

i. Common Descriptive Language (Taxonomy)

Definition: A common definition that experts in a field will accept.

Importance/Use: This is important in order to clear up ambiguous terms and ideas, for example stealing a file over copying a file.

j. Social Engineering

Definition: Using deception to get what you want.

Importance/Use: for example, calling up an IT Dept and saying you forgot a password, and pretending to be an employee.

8. (6 marks) List three themes that have repeated throughout the history of infoSec

CIA - confidentiality, Accessibility, Integrity.

Risk management - Identify risks.

Hardware is easy to secure, People and Procedure is difficult.

9. (6 marks) List and briefly explain the 6 atomic elements of INFOSEC according to the model described by Donn Parker (an example, while not required, may help your explanation).

Confidentiality ✓

Authentication ✓

Utility ✓

Accessibility ✓

Integrity ✓

Possession ✓